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A portable computer system contained within a housing that comprises an electronic muscle material for performing a plurality of functions. The electronic muscle can be used to replace buttons or keys used in many PDAs. The movement of the electronic muscle material can charge the battery. When handled, the electronic muscle material can further detect the left- or right-handedness of the user and, based on the handedness, can generate function buttons or other alterations to accommodate the user's hand preference and finger placement. The electronic muscle can change shape to accommodate the user's hand for comfort and, further, as a security function to identify and authorize the user. Additionally, the electronic muscle material in the housing can be caused to vibrate at given frequencies so that it can generate an alarm and can function as a speaker or a dynamically directional microphone.